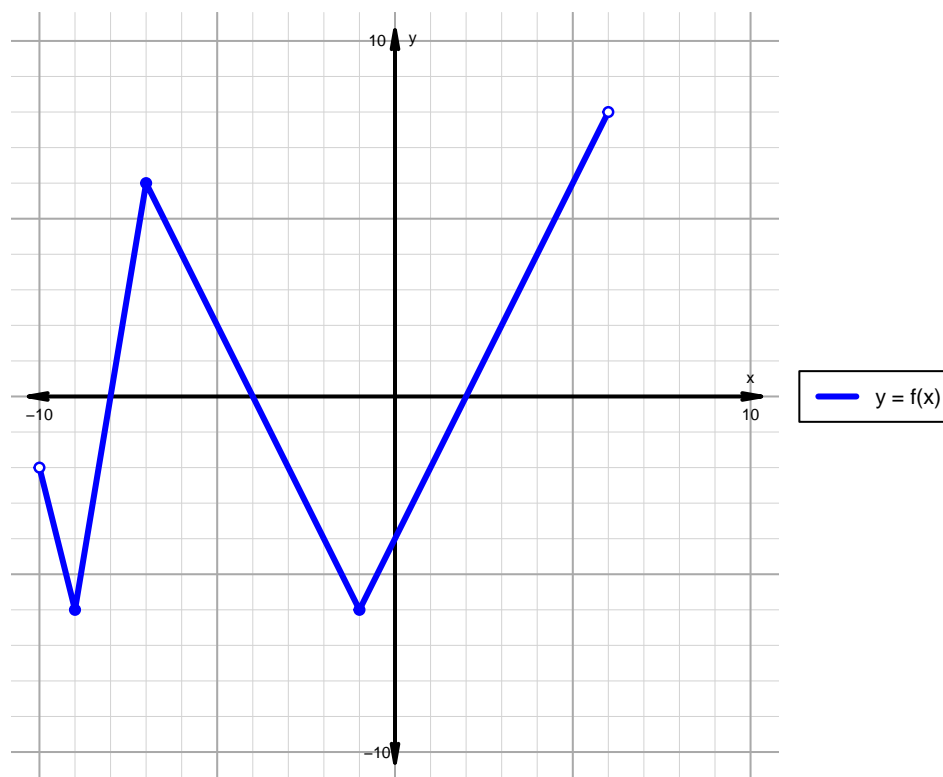


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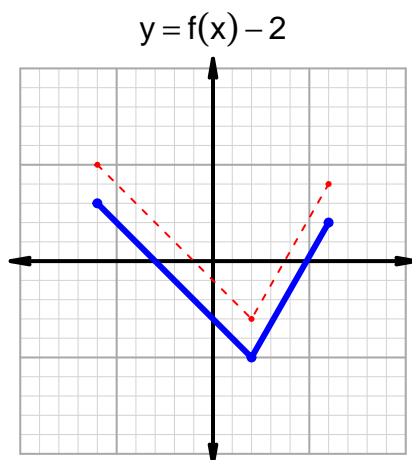
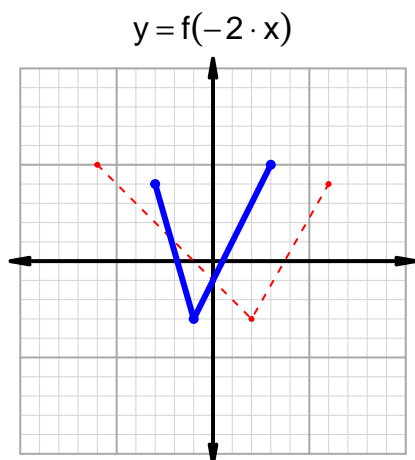
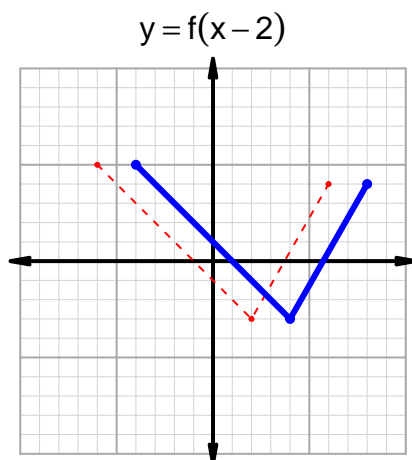
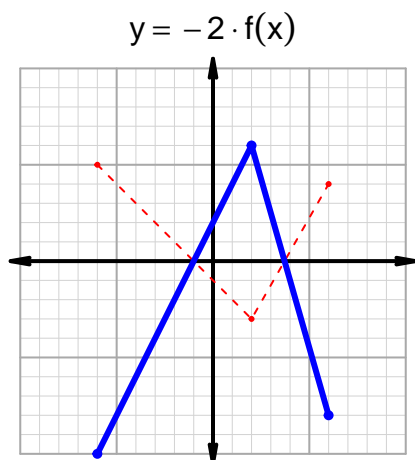
Intervals, Transformations, and Slope Solution (version 33)1. The function f is graphed below.

Indicate the following intervals using interval notation. Remember, you can use \cup between two intervals to indicate the union. Except for range, all intervals will indicate x values; this is standard.

Feature	Where
Positive	$(-8, -4) \cup (2, 6)$
Negative	$(-10, -8) \cup (-4, 2)$
Increasing	$(-9, -7) \cup (-1, 6)$
Decreasing	$(-10, -9) \cup (-7, -1)$
Domain	$(-10, 6)$
Range	$(-6, 8)$

Intervals, Transformations, and Slope Solution (version 33)

2. In the four graphs below, $y = f(x)$ is graphed as a dotted line. With a solid line, please graph the transformations indicated by the equations below.



3. Let function g be defined by the table below. Use the formula $\frac{g(x_2) - g(x_1)}{x_2 - x_1}$ to find the average rate of change between $x_1 = 22$ and $x_2 = 49$. Express your answer as a reduced fraction.

x	$g(x)$
22	40
40	49
49	85
85	22

$$\frac{f(49) - f(22)}{49 - 22} = \frac{85 - 40}{49 - 22} = \frac{45}{27}$$

The greatest common factor of 45 and 27 is 9. Divide numerator and denominator by the greatest common factor.

$$\text{AROC} = \frac{5}{3}$$